

# Where Cruelty Lessens Suffering

Through Vivisection  
Experiments, Science  
Has Discovered  
Antitoxins to  
Fight Disease,

Thus Saving the  
Lives of Chil-  
dren and  
Their  
Elders.

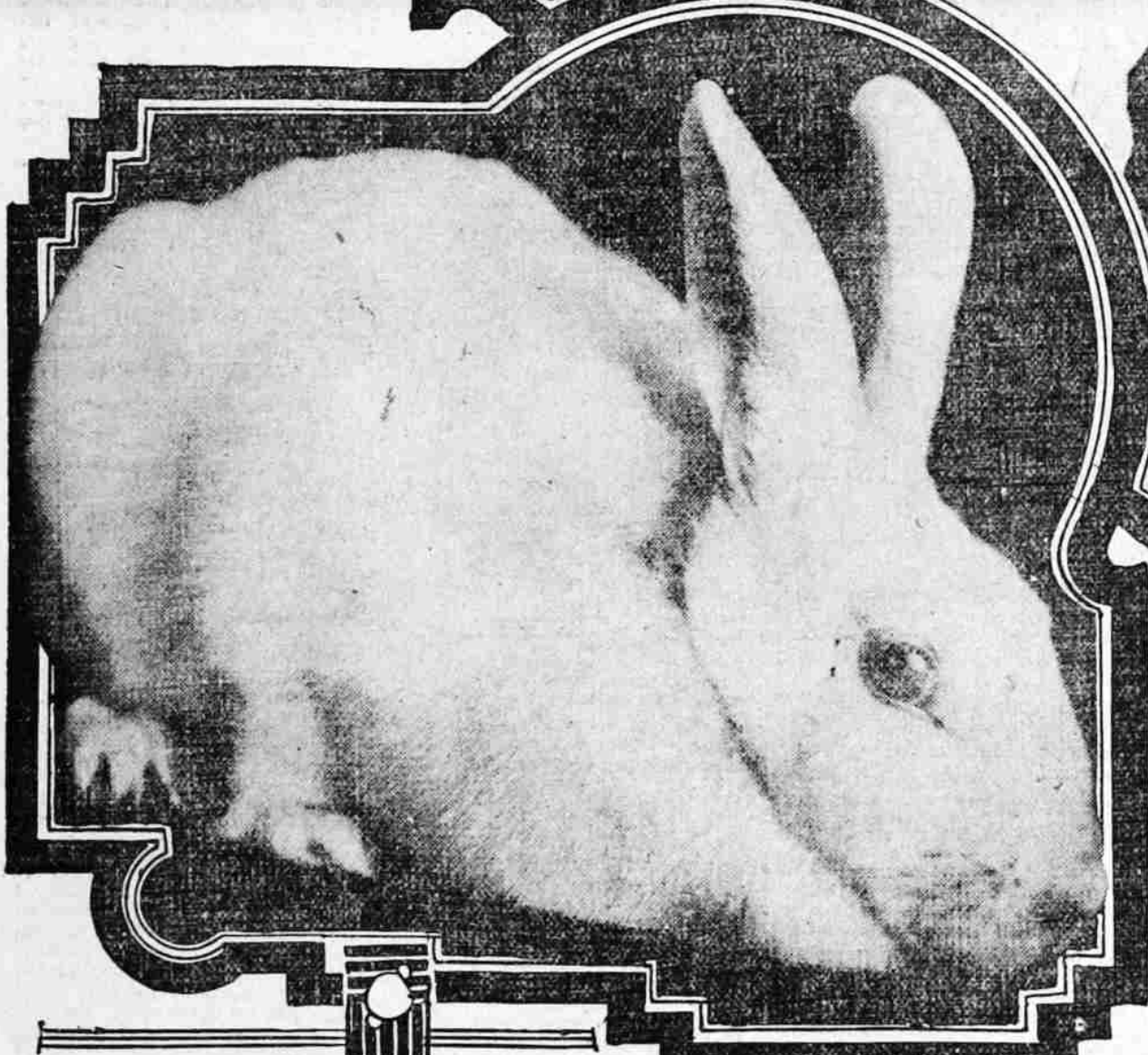
Has a physician the right to in-  
fect germs into an animal in order  
to discover anti-toxins that will  
conquer that disease in humans?  
Has he the right to cut the animal  
open while still alive to exam-  
ine the internal organs just to learn  
how the same thing can be done to  
save a human life?  
Has he the right to place bacteria  
in a healthy animal so he can get a  
virus for inoculation against tuber-  
culosis, small pox, spinal meningitis  
and a score of other diseases?

The antivivisectionists say not.  
In England they have had laws  
passed to prevent this alleged  
cruelty to animals. In New York  
vivisection is greatly modified on  
account of recent legislation against  
it and in Pennsylvania recently five  
members of the faculty of the  
University of Pennsylvania were  
arrested on a charge of cruelty to  
animals because they practiced  
vivisection.

Vivisectionists point to many  
cases where they say they have  
worked cures as the result of viv-  
isection. One of these is Victoria,  
the Queen of Spain. Vivisection-  
ists say she never could have been  
healed of her recent illness had it  
not been by the knowledge gained  
through vivisection.

Dr. Richard L. Pearce, professor  
of research medicine of the Uni-  
versity of Pennsylvania, one of the  
men arrested, in reply to his ac-  
cusers, has answered the charges  
of the antivivisectionists.

"Let me put it squarely," said  
Dr. Pearce. "If you accepted the



UPPER left, Queen of  
Spain and her children.  
Right, a guinea pig inocu-  
lated with typhoid germs.  
Center, a doctor injecting  
germs in a rabbit. Below, a  
rabbit after having been in-  
oculated with pneumonia.

moral principle of the present anti-  
tuberculosis movement, you must  
accept animal experimentation as a  
moral principle, for without animal  
experimentation we would have no  
antituberculosis movement and no  
hope for the consumptive and his  
dependents, and the world's great-  
est efforts in man's redemption of  
man would never have been.

"Not only do antivivisectionists  
lose sight of the wonderful boon of  
mankind made possible through ex-  
periments on animals, he showed,  
but their propaganda, if followed,  
would actually result in increased  
suffering in the animals they seek  
to protect.

## ANIMALS MUST DIE WITHOUT VIVISECTION.

"The various societies established  
for the protection of animals have  
taken no share in the study of the  
cause, course, prevention and cure  
of the natural diseases of domestic  
animals. They have no remedy ex-  
cept the death chamber.

"Reports of these societies show  
that thousands of dollars are avail-  
able for the killing of the cat and  
dog, but not a cent for the study of  
the diseases and injuries of the ani-  
mals.

"Is the practice which destroys

animals by the hundreds of thou-  
sands because they are in the way  
or because in their illness they dis-  
turb the sensibilities of their own-  
ers, but which will not attempt to  
diminish suffering among animals  
by the investigation of animal dis-  
eases, based on a sound moral  
principle?

"Should not those who desire to  
prevent suffering among animals be  
the first to support the study of  
the diseases of animals?"

Dr. Pearce said a large mass of  
evidence exists to show that most  
of the great facts of medicine upon  
which modern practice rests are the  
result of animal experimentation.

"The argument demands, how-  
ever," he continued, "an account  
of experimentation which in the  
study of one disease has led to the  
saving of life, or the increased hap-  
piness and efficiency of mankind.

"As an example, I will use a dis-  
ease which is well known to the  
nonmedical, in fact, better known  
than any other disease; one which  
takes its toll in every walk and  
condition in life, and which on ac-  
count of the insidious onset and  
hopeless diagnosis was until recent  
years the dread and fear of every

family responsible for children in  
the state of adolescence, or which  
had sent out into the world those  
who had attained manhood and  
womanhood.

## TUBERCULOSIS FOUGHT THROUGH VIVISECTION.

"I refer to tuberculosis, or con-  
sumption, the great white plague  
of the civilized world that one of all  
diseases which causes the greatest  
number of deaths, which has in the  
past led all mortality statistics with  
a record of one-seventh of all  
deaths.

"Fifty years ago the exact knowl-  
edge of the cause, the control and  
treatment of this disease was nil.  
Today this disease claims its special  
hospitals, sanatoria, dispensar-  
ies, its special group of diagnos-  
ticians and scientific investigators  
and an army of social workers,  
earnestly attempting to educate the  
people at length in the means of  
controlling and eventually aboli-  
shing the dreaded scourge. What  
happened in the intervening years  
to raise the hope, now almost uni-  
versal among all peoples, that  
tuberculosis can be eliminated?

"For 170 years, the period since  
it had been shown (Sylvius, 1695)  
that tubercles are the essential le-

sion of pulmonary consumption, no  
advance had been made in the  
knowledge of the causation of the  
disease, and, therefore, as may be  
readily understood, no advance in  
the means of its control or cure.

"But in 1865 the veil was lifted,  
and by one who, convinced by his  
clinical observations that the dis-  
ease was infectious, decided to put  
his theory to the test of experi-  
ment.

"He brought material from the  
tuberculous in contact with and in-  
oculated it into rabbits and found  
that the disease could be transmit-  
ed to these animals and from ani-  
mal to animal; stated flatly that it  
must be due to a germ, and thus  
took the first step in establishing  
the fact that tuberculosis is a spe-  
cific transmissible disease.

"But he did more than this, he  
showed also that a disease of cat-  
tle, analogous in its manifestations  
to tuberculosis in man, could also  
be transmitted to animals, and thus  
he called attention to the identity  
of the tuberculosis process in man  
and animals.

"Within three years it was shown  
that tuberculosis, no matter in what  
part of the body it occurs, contains  
an infective element capable of  
causing the disease in guinea pigs.  
Within five years, again by animal

inoculation, it was found that the  
diseased meat of cattle as well as  
their milk could transmit the dis-  
ease.

## EXPERIMENTS RESULT IN GREAT DISCOVERIES.

"What a wonderful progress was  
this in five years, as the result of  
simple experiments on rabbits and  
guinea-pigs—contrast it with the  
ignorance concerning tubercle dur-  
ing the preceding 170 years without  
such experimentation.

"But this was only the beginning.  
In the ten years, 1870 to 1880, the  
continued use of animals demon-  
strated the transmission of the dis-  
ease by the inhalation of dried  
sputum, thus establishing the now  
well-recognized fact that it is not  
contact with a tuberculous individ-  
ual that is responsible for the trans-  
mission of the disease, but that it  
is the inhalation of the dried sputum  
floating as dust in the air.

"Upon such observations are  
based our present efforts to destroy  
the sputum before it dries and to  
keep thoroughly clean the rooms  
occupied by the tuberculous. It is  
likewise upon these experiments  
that municipal ordinances concern-  
ing spitting in public places and  
conveyances are based.

"Lupus, a disease of the skin,  
previously of doubtful classification,  
was brought into the group of tu-  
berculous diseases, and the princi-  
ple of its treatment established on  
a correct basis, and many other con-  
ditions, variously viewed at that time  
by the practitioner of medicine  
were similarly correctly grouped.

"Thus in seventeen years, by ani-  
mal experimentation was informa-  
tion obtained which the previous  
170 years of observation failed to  
give.

"I have given these facts in de-  
tail because I wish to present to  
you as clearly as I can and without  
possibility of doubt on your part,

the way in which animals have  
been used, in the study of one dis-  
ease, to elucidate the mechanism of  
its causation and transmission; and  
to allow you to come to the logical  
conclusion that solely by the use  
of animals, and by no other method  
has been obtained the scientific  
basis upon which rests the present  
crusade against tuberculosis."

## BENEFITS OF ANIMAL VIVISECTION SHOWN.

Doctor Pearce then presented a  
summary of the practical achieve-  
ments of medical investigation  
which are the direct result of ani-  
mal experimentation or are based  
on the principles concerning dis-  
ease which have been established  
through such experimentation. The  
summary follows:

1. The discovery and develop-  
ment of the antiseptic method  
which has made possible all the  
wonderful results of modern sur-  
gery.

2. The practical development of  
modern abdominal surgery, includ-  
ing operations on the stomach, in-  
testines, appendix, liver, gall stones,  
pancreas, spleen, kidneys, etc.

3. The development of the mod-  
ern surgery of the brain.

4. The new surgery of the chest,  
including the surgery of the heart,  
lungs, aorta, esophagus, etc.

5. The almost complete prevent-  
ing of lockjaw after operations and  
even after accidents.

6. The reduction of the death  
rate after compound fractures  
from two out of three, i. e., sixty-  
six in a hundred, to less than one  
in a hundred.

7. The reduction of this death  
rate of ovariectomy from two out of  
three, or sixty-six in a hundred, to  
two or three out of a hundred.

8. The reduction of the death  
rate after operations like hernia,  
amputation of the breast and of  
most tumors so that it is now al-  
most a negligible factor.

9. The abolition wherever the  
proper measures are taken, in this  
country and the canal zone, of yel-  
low fever.

10. An enormous diminution of  
the ravages of malaria, and, in  
some places, its total abolition.

11. The reduction of the death  
rate of hydrophobia from 12 to 14  
per cent.

12. The development of a meth-  
od of direct transfusion of blood  
which has already saved very many  
lives.

13. The reduction through the  
use of antitoxin of the death rate  
of diphtheria all over the civilized  
world. This reduction shows a  
change from a mortality of 79.9  
deaths per 100,000 of population in  
1894, to 19 deaths per 100,000 in  
1905.

14. The reduction of the mor-  
tality of epidemic cerebro-spinal  
meningitis from 75 or even 90-odd  
per cent in the absence of serum  
treatment, to 20 per cent and less  
when the specific serum is used.

15. The cutting down of the  
death rate of tuberculosis by from  
30 to 50 per cent. This is due not  
to treatment by serum or vaccines,  
but to methods of prevention  
based on the knowledge of the  
cause of tuberculosis.

## MATERNITY PERILS ARE LESSEMED.

16. In the British Army and  
Navy Malta fever has been abo-  
lished. In 1905, before the success-  
ful researches on this disease, it at-  
tacked nearly 1,300 soldiers and  
sailors. In 1907 the army had only  
eleven cases; in 1908, five cases; in  
1909, one case.

17. The almost complete abo-  
lition of child-bed fever, the chief  
former peril of maternity. Its mor-  
tality has been reduced from five  
to ten up even to fifty-seven in  
every hundred mothers to one in  
1,250 mothers.

18. The discovery of a remedy  
(Salvarsan), which bids fair to  
protect innocent wives and unborn  
children, besides many others in  
the community at large, from the  
horrible curse of syphilis.

19. The discovery of a vaccine  
against typhoid fever; which in the  
recent army maneuvers on the  
Mexican border prevented the de-  
velopment of typhoid among the  
soldiers, which in hospitals has  
greatly reduced its incidence among  
nurses and which is now coming  
into general use in all places where  
infection is possible. The improved  
sanitation which has helped to re-  
duce the typhoid death rate in this  
country is itself largely the result  
of bacteriologic experimentation.

20. Many recent activities indi-  
cate that we are gradually nearing  
the discovery of the cause, and then  
we hope of the cure, of several of  
the dreadful scourges of humanity  
as cancer, infantile paralysis, pella-

gra, and that diseases of the trop-  
ics, such as sleeping sickness, etc.,  
are about to come under man's con-  
trol.

21. Finally, it may be pointed out  
that animals themselves have been  
enormously benefited, for by dis-  
covering the causes, and in many  
cases the means of preventing tu-  
berculosis, rinderpest, anthrax,  
glanders, hog cholera, chicken chol-  
era, lumpy jaw, distemper and oth-  
er diseases of animals, animal suf-  
fering has been greatly diminished.

Taking up the charge of antiviv-  
isectionists that animal experimen-  
tation is "unnecessarily cruel and  
demoralizing and brutal in its in-  
fluence, both on those who conduct  
and those who observe it," Dr.  
Pearce said:

"The discussion of cruelty may be  
presented from any and all points  
of view. It could be shown that  
in their evidence concerning  
specific incidents of alleged cruelty  
the opponents of animal experi-  
mentation always omit the very im-  
portant fact that the animal in  
question was thoroughly anesthe-  
tized, usually by ether or chloro-  
form or some mixture of these with  
alcohol, and could not have felt  
pain.

"Moreover, much of the evidence  
is in connection with experiments  
made many years ago, some of them  
before the days of anesthesia, and  
almost entirely in distant countries.

"The falsity of the evidence thus  
presented can be shown in two  
ways: (1) By analyzing the evi-  
dence they present in their pam-  
phlets and pointing out its omis-  
sions and inaccuracies, and (2) by  
showing that the great majority of  
experiments are really not operative  
experiments.

"Thus the official figures for Great  
Britain for 1909 show that of all  
animal experiments, 93.96 per cent  
were simple inoculations not in-  
volving any cutting operation. Of  
the remaining small number, 3.44  
per cent of the animals were killed  
under an anesthetic and only 2.6  
per cent were allowed to recover  
from anesthesia, and on these no  
second procedure liable to cause  
pain was allowed without further  
anesthesia.

"The medical research of today is  
only to a small degree a continua-  
tion of the physiological type of ex-  
periment which its opponents so  
dearly love to quote. It is rather a  
study by the methods of chemistry  
and bacteriology, of diseases arti-  
ficially reproduced. In these, the  
knife plays only a minor role, and in  
the majority none at all. Such  
statements, however, are not accept-  
ed by the opponents of animal ex-  
perimentation."

## The Body as a Stove.

You can pile tons and tons of coal  
into a stove during the winter, but if  
you do not open up the drafts and  
provide some fresh air laden with  
oxygen the fire will not burn and no  
benefit will be derived from the fuel.  
If just a little air is allowed to en-  
ter, the fire may smoulder and con-  
sume the coal, but the family will  
not derive much benefit. In this  
way the body is like a stove. You  
may stuff it with fuel (food), but if  
you do not provide fresh air half the  
benefit is wasted.

The fresh air schools that have  
been established in several of the  
larger cities are a striking illustration  
of this. Weak, puny children  
that never could survive a term  
spent in an ordinary schoolroom be-  
gin to gain almost immediately after  
entering the out-of-door schools.  
In these schools the children are  
practically out of doors all day, be-  
ing protected only from the storms  
and severe winds. They wear warm  
wraps all the time, even while study-  
ing at their seats. At frequent in-  
tervals they play games or have  
other light exercises. In some  
schools hot soup is served once dur-  
ing each session, for it has been  
found that many of these undevel-  
oped children do not eat the proper  
food at home.

In some of the modern hospitals  
there are out-of-door living rooms,  
or sun parlors, for the use of those  
patients who are able to be moved  
about. It is a common occurrence  
to see babies sleeping peacefully in  
some sheltered nook of the porch  
even on the coldest of winter days.  
Not only is it a fact that these ba-  
bles do not take cold from this  
treatment, but they thrive wonder-  
fully and begin to take on flesh.

All this tends to prove what edu-  
cators are trying so hard to impress  
upon the public—that people, as a  
rule, would be much healthier and  
happier if they lived in the open air  
the greater part of the time.